



8820 Broadband Access Concentrator AC to DC Power Supply Installation Instructions

Document Number 8800-A2-GZ41-20

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AC to DC Power Supply

The AC to DC Power Supply consists of a power supply chassis and one or two power modules.

- The power supply chassis with one power module is Feature Number 8800-F2-900.
- The power module is Feature Number 8800-F2-901.

The AC to DC Power Supply can be used to supply redundant power to a single 8820 Broadband Access Concentrator (BAC), or non-redundant power to one or two BACs.

The maximum DC output of each power module is 825 watts. Do not exceed 825 watts in your BAC configuration.

Product-Related Documents

Complete documentation for Paradyne products is available at **www.paradyne.com**. Select *Support* → *Technical Manuals*.

Document Number	Document Title
8820-A2-GN20	<i>8820 Broadband Access Concentrator Installation Guide</i>

To request a paper copy of a Paradyne document, or to speak with a sales representative, please call 1-727-530-2000.

Installation Overview

Installation of the AC to DC Power Supply requires the following steps:

1. Mount the power supply in your rack.
2. Connect the power supply to the 8820 BAC.
3. Connect the power supply to an AC power source.

Be sure to register your warranty at www.paradyne.com/warranty.

Mounting the Power Supply

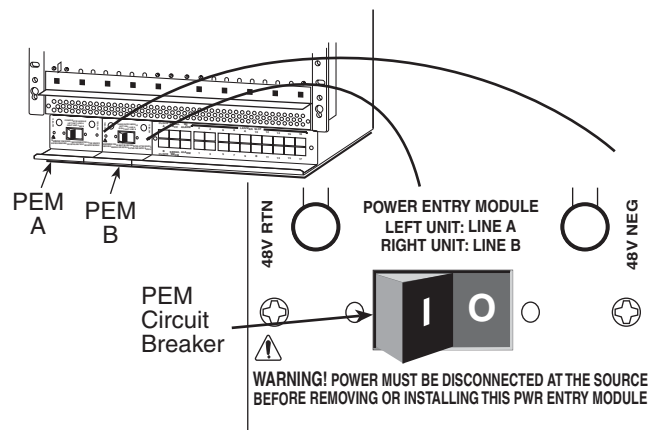
► Procedure

To mount the power supply:

1. Remove the power modules from the power supply chassis.
2. The power supply is shipped with its mounting brackets set up for a 19-inch rack. If you are installing the power supply in a 23-inch rack, remove the mounting brackets from the power supply chassis, turn them, and reinstall them with their short sides against the body of the power supply chassis.
3. Determine where the power supply will be placed in the rack. The power supply should be placed under the BAC or BACs it will supply power to.
4. If the rails of your rack have unthreaded screw holes, install self-retaining nuts on the rails where the mounting brackets will be fastened.
5. Line up the mounting brackets with the front rail holes.
6. Loosely install the bottom screws first and then the top screws.
7. Tighten all screws firmly with a Phillips screwdriver.
8. Replace the power modules removed in Step 1.

Connecting the Power Supply to the BAC

Power Entry Modules (PEMs) installed in the front of the BAC provide –48 VDC power distribution, a 35-amp circuit breaker, power line filtering and input power monitoring. They are designated PEM A (on the left) and PEM B (on the right). All input power is distributed to the system via the PEMs, so that if one PEM or one power source fails, power will be supplied through the other PEM automatically without service interruption. Power inputs may be connected to the PEMs at the front of the BAC using the PEM's terminal blocks, or at the terminal block on the back of the BAC. This document shows the recommended technique, with connections at the rear of the BAC. See the *8820 Broadband Access Concentrator Installation Guide* for more information.



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Review the following procedures and determine which is appropriate for your configuration. The recommended configuration is two power modules connected to one BAC (providing a redundant power source). For all configurations:

- Make sure that the AC power cords are not connected to the power supply until other wiring is completed.
- Use 8 AWG solid or stranded wire.
- Attach ring tongue terminals to the ends of the wires to be connected to the BAC power terminal block. See the *8820 Broadband Access Concentrator Installation Guide* for more information.
- Attach ring tongue terminals to the ends of the wires to be connected to the power supply.
- Strip 1/2 inch of insulation from the ends of the wires to be fastened at split bolt connectors or the grounding lug of the BAC.

CAUTION:

The following procedures must be performed by a trained technician.

Providing Redundant Power to One BAC (Recommended)

► Procedure

To connect two power modules to one BAC (see Figure 1):

1. If none exist, install split bolt connectors or a grounding block near the rack where the power supply and BAC reside.

NOTE:

Split bolt connectors are not supplied.

2. Connect:
 - The grounding lug of the BAC to an earth ground.
 - The PWR A -48V terminal of the BAC to the -48VA terminal of the power supply.
 - The PWR A RTN terminal of the BAC to a split bolt connector.
 - The 0VRA terminal of the power supply to the split bolt connector.
 - The PWR B -48V terminal of the BAC to the -48VB terminal of the power supply.
 - The PWR B RTN terminal of the BAC to a split bolt connector.
 - The 0VRB terminal of the power supply to the split bolt connector.
 - The split bolt connectors to an earth ground.
3. Verify that the power switches of the PEMs and the power modules are in the off (0) position.
4. Insert the AC power cords into the Input A and Input B sockets at the rear of the power supply. Plug the other ends into an AC power source.
5. Turn to the On (1) position the power switches of PEM A and PEM B of the BAC and both power modules. Verify that the POWER LEDs at the front of the power modules and the POWER A and POWER B LEDs at the top of the BAC are on.

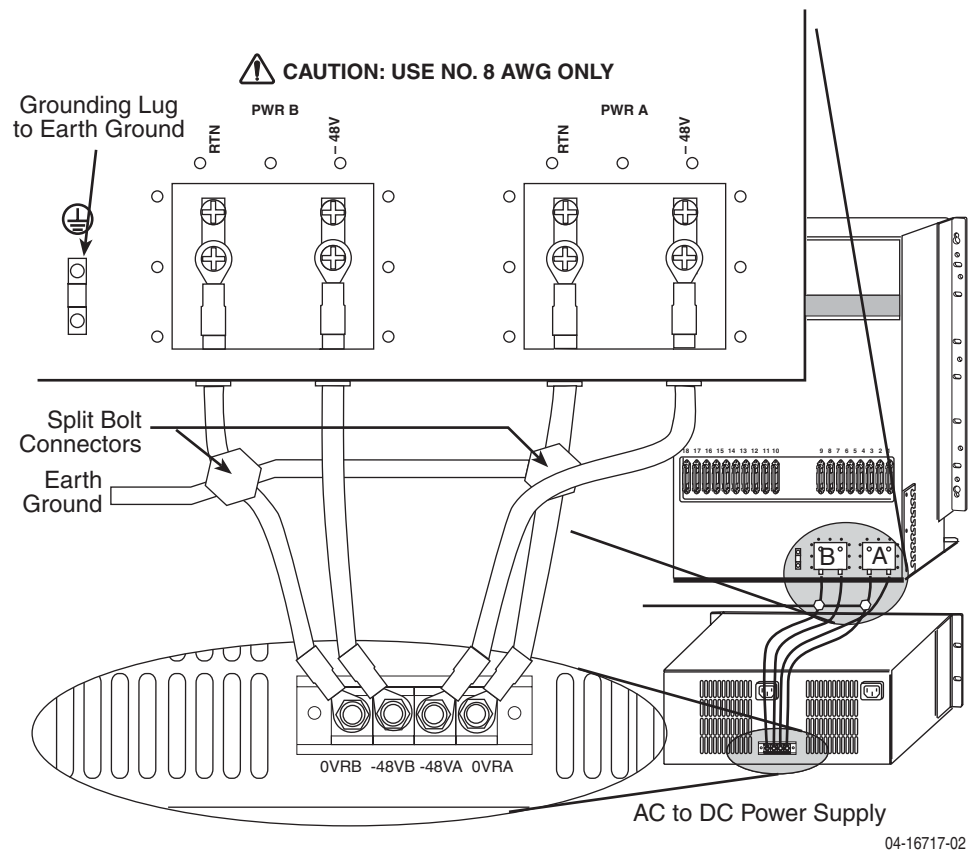


Figure 1. One BAC Powered by Two Power Modules

Providing Non-Redundant Power to One BAC

► Procedure

To connect one power module to one BAC (see Figure 2):

1. If none exists, install a split bolt connector or grounding block near the rack where the power supply and BAC reside.

NOTE:

Split bolt connectors are not supplied.

2. Connect:
 - The grounding lug of the BAC to an earth ground.
 - The PWR A –48V terminal of the BAC to the –48VA terminal of the power supply.
 - The PWR A RTN terminal of the BAC to the split bolt connector.
 - The 0VRA terminal of the power supply to the split bolt connector.
 - The split bolt connector to an earth ground.
3. Verify that the power switches of the PEMs and the power module are in the off (0) position.
4. Insert the AC power cord into the Input A socket at the rear of the power supply. Plug the other end into an AC power source.
5. Turn to the On (1) position the power switches of PEM A and the power module. Verify that the POWER LED at the front of the power module and the POWER A LED at the top of the BAC are on.

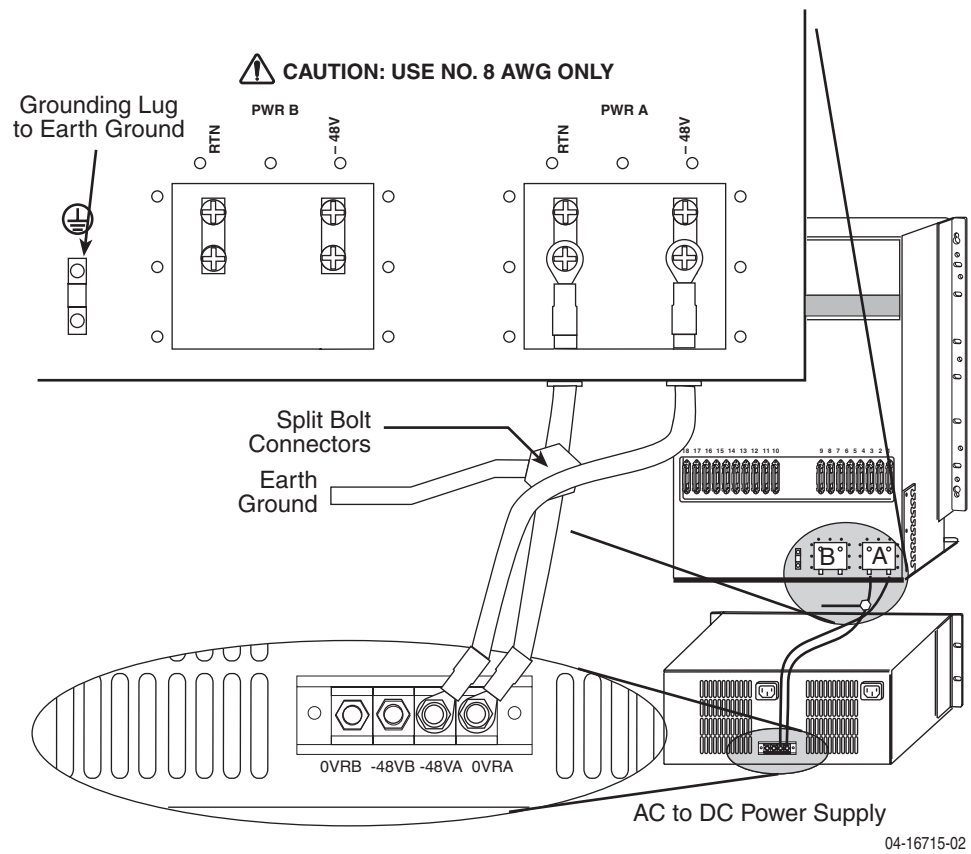


Figure 2. One BAC Powered by One Power Module

Providing Non-Redundant Power to Two BACs

► Procedure

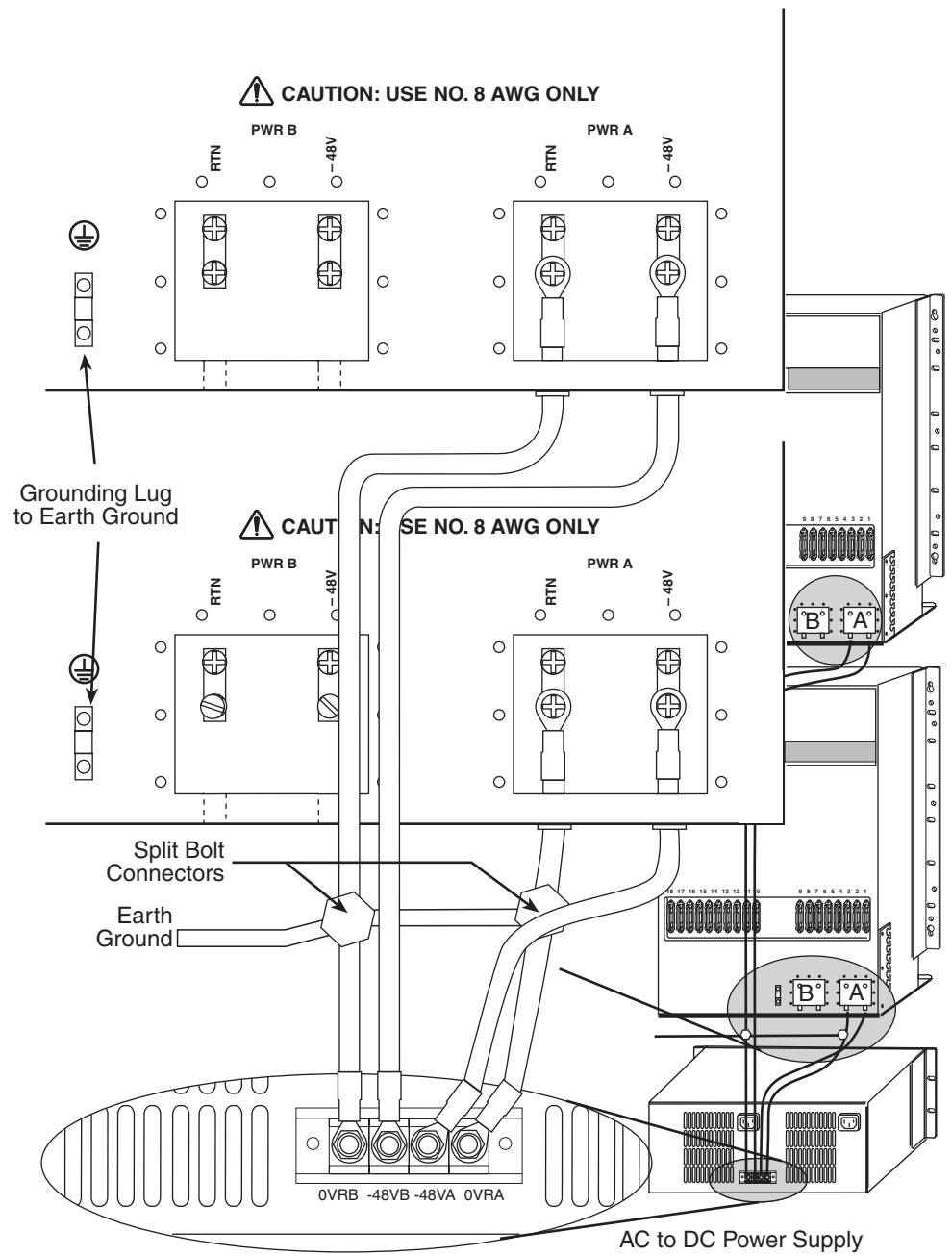
To connect two power modules to two BACs (see Figure 3):

1. If none exist, install split bolt connectors or a grounding block near the rack where the power supply and BACs reside.

NOTE:

Split bolt connectors are not supplied.

2. Connect:
 - The grounding lugs of the BACs to an earth ground.
 - The PWR A –48V terminal of the first BAC to the –48VA terminal of the power supply.
 - The PWR A RTN terminal of the first BAC to a split bolt connector.
 - The 0VRA terminal of the power supply to the split bolt connector.
 - The PWR A –48V terminal of the second BAC to the –48VB terminal of the power supply.
 - The PWR A RTN terminal of the second BAC to a split bolt connector.
 - The 0VRB terminal of the power supply to the split bolt connector.
 - The split bolt connectors to an earth ground.
3. Verify that the power switches of the PEMs and the power modules are in the off (0) position.
4. Insert the AC power cords into the Input A and Input B sockets at the rear of the power supply. Plug the other ends into an AC power source.
5. Turn to the On (1) position the power switches of PEM A of each BAC and both power modules. Verify that the POWER LEDs at the front of the power modules and the POWER A LEDs at the top of the BACs are on.



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Figure 3. Two BACs Powered by Two Power Modules

Warranty, Sales, Service, and Training Information

Contact your local sales representative, service representative, or distributor directly for any help needed. For additional information concerning warranty, sales, service, repair, installation, documentation, training, distributor locations, or Paradyne worldwide office locations, use one of the following methods:

- **Internet:** Visit the Paradyne World Wide Web site at **www.paradyne.com**.
(Be sure to register your warranty at **www.paradyne.com/warranty**.)
- **Telephone:** Call our automated system to receive current information by fax or to speak with a company representative.
 - Within the U.S.A., call 1-800-870-2221
 - Outside the U.S.A., call 1-727-530-2340

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8800-A2-GZ41-20